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PATENTS

Attorney Docket No.: ELM-1 Cont.14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Glenn J. Leedy

Application No. : 10/766,557 Confirmation No.: 3092

Filed : January 27, 2004

For : METHODS FOR MASKLESS LITHOGRAPHY

Group Art Unit : 2812

Examiner : Amir Zarabian

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.56 and 1.97,  
applicant wishes to call the attention of the Examiner to the  
following documents:

U.S. Patent Documents

Sobczak	08-05-1986	US 4,604,162
Butt et al.	07-18-1989	US 4,849,857
Williamson	05-22-1990	US 4,928,058
Sliwa	02-05-1991	US 4,990,462
Kessler et al.	05-05-1992	US 5,110,712
Sliwa et al.	06-02-1992	US 5,119,164
Moslehi	02-08-1994	US 5,284,804
Clifton et al.	01-02-1996	US 5,480,842
Sachdev et al.	11-28-1995	US 5,470,693
Flesher et al.	03-31-1998	US 5,733,814
Clifton et al.	04-09-2002	US Re 37,637

Foreign Patent Documents

EP 0 201 380	B1	12-17-1986	Fairchild Semiconductor Corporation
EP 0 224 418	B1	06-03-1987	Fujitsu Limited
EP 0 419 898	B1	04-03-1991	Siemens Aktiengesellschaft
EP 0 455 455	B1	11-06-1991	AT&T Corp.
EP 0 487 302	B1	05-27-1992	Shin-ETSU Handotai Company Limited
EP 0 503 816	B1	09-16-1992	Shin-ETSU Handotai Company Limited
EP 0 518 774	B1	12-16-1992	France Telecom
EP 0 526 551	B1	02-10-1993	The Commonwealth of Australia
EP 0 554 063	B1	08-04-1993	Canon Kabushiki Kaisha
EP 0 555 252	B1	08-18-1993	Fraunhofer-Gesellschaft Zur Förderung Der Angewandten Forschung E.V..
WO 1989 010255		11-02-1989	3D Systems Inc.
WO 1990 009093		08-23-1990	Polylithics Inc.
WO 1992 017901		10-15-1992	Integrated System Assemblies Corporation

Nonpatent Literature Documents

Jones, R.E., Jr. "An evaluation of methods for passivating silicon integrated circuits"; April 1972; pp. 23-8

Svechnikov, S.V.; Kobylyatskaya, M.F.; Kimarskii, V.I.; Kaufman, A.P.; Kuzovlev, Yu. I.; Cherepov, Ye. I.; Fomin, B.I.; "A switching plate with aluminum membrane crossings of conductors"; 1972

Sun, R.C.; Tisone, T.C.; Cruzan, P.D.; "Internal stresses and resistivity of low-voltage sputtered tungsten films (microelectronic cct. conductor)"; March 1973; pp. 1009-16

Wade, T.E.; "Low temperature double-exposed polyimide/oxide dielectric for VLSI multilevel metal interconnection"; 1982; pp. 516-19

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Boyer, P.K.; Collins, G.J.; Moore, C.A.; Ritchie, W.K.; Roche, G. A.; Solanski, R. (A); Tang, C.C.; "Microelectronic thin film deposition by ultraviolet laser photolysis MONOGRAPH TITLE - Laser processing of semiconductor devices"; 1983; pp. 120-126

Boyer, P.K.; Moore, C.A.; Solanki, R.; Ritchie, W.K.; Roche, G.A.; Collins, G.J.; "Laser photolytic deposition of thin films"; 1983; pp. 119-27

Chen, Y.S.; Fatemi, H.; "Stress measurements on multilevel thin film dielectric layers used in Si integrated circuits"; May-June 1986; pp. 645-9

Salazar, M.; Wilkins, C.W., Jr.; Ryan, V.W.; Wang, T.T.; "Low stress films of cyclized polybutadiene dielectrics by vacuum annealing"; Oct. 21-22, 1986; pp. 96-102

Townsend, P.H.; Huggins, R.A.; "Stresses in borophosphosilicate glass films during thermal cycling"; Oct. 21-22, 1986; pp. 134-41

Pai, Pei-Lin; "Multilevel Interconnection Technologies--A Framework And Examples"; 1987; pp. 1871

Pei-lin Pai; Chetty, A.; Roat, R.; Cox, N.; Chiu Ting; "Material characteristics of spin-on glasses for interlayer dielectric applications"; November 1987, pp. 2829-34

Allen, Mark G.; Senturia, Stephen D.; "Measurement of polyimide interlayer adhesion using microfabricated structures"; 1988; pp. 352-356

Chang, E.Y.; Cibuzar, G.T.; Pande, K.P.; "Passivation of GaAs FET's with PECVD silicon nitride films of different stress states"; September 1988; pp. 1412-18

Riley, P.E.; Shelley, A.; "Characterization of a spin-applied dielectric for use in multilevel metallization"; May 1988; pp. 1207-10

Tamura, H.; Nishikawa, T.; Wakino, K.; Sudo, T.; "Metalized MIC substrates using high K dielectric resonator materials"; October 1988; pp. 117-126

Kochugova, I.V.; Nikolaeva, L.V.; Vakser, N.M., (M.I. Kalinin Leningrad Polytechnic Institute (USSR)); "Electrophysical investigation of thin-layered inorganic coatings"; 1989; pp. 826-828

Nonpatent Literature Documents

Reche, J.J. H.; "Control of thin film materials properties used in high density multichip interconnect"; April 24-28, 1989; p. 494

Maw, T.; Hopla, R.E.; "Properties of a photoimageable thin polyimide film"; Nov. 26-29-, 1990; pp. 71-6

Draper, B. L.; Hill, T.A.; "Stress and stress relaxation in integrated circuit metals and dielectrics"; July-Aug. 1991; pp. 1956-62

Guckel, H.; "Surface micromachined pressure transducers"; 1991; pp. 133-146

Garino, T.J.; Harrington, H. M.; "Residual stress in PZT thin films and its effect on ferroelectric properties'; 1992; pp. 341-7

The aforementioned references are listed on the accompanying Form PTO-SB/08 (submitted in duplicate).

Pursuant to 37 C.F.R. § 1.98(a)(2), no copies of the aforementioned U.S. Patent Documents are being submitted.

Copies of the listed Foreign Patent Documents and Nonpatent Literature Documents are being submitted herewith.

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

It is respectfully requested that these references be: (1) fully considered by the Patent and Trademark Office during the examination of this application; and (2) printed on any patent which may issue on this application. Applicant requests that a copy of Form PTO-SB/08, as considered and initialled by the Examiner, be returned with the next communication.

The Clifton and Flesher U.S. Patent Documents (U.S. Patent Nos. 5,480,842, 5,733,814, and Re 37,637) were cited in an Office Action mailed in co-pending commonly assigned U.S. Patent Application No. 10/614,067 on September 21, 2005. Butt et al. U.S. Patent No. 4,849,857 was cited in an Office Action mailed in co-pending commonly assigned U.S. Patent Application No. 10/971,341 on September 20, 2005.

The remaining references cited in this Information Disclosure Statement were brought to applicant's attention in a third-party search conducted less than three month before filing of this Statement. A copy of the third-party search results is enclosed herewith.

This Statement is submitted before the mailing date of the first Office Action on the merits. To the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this Supplemental Information Disclosure Statement was known to any individual designated in § 1.56 (c) more than three months prior to the filing of this Statement. Pursuant to 37 C.F.R. § 1.97(b) (3), applicant believes no fee is due in connection with this statement. However, if for any reason a fee is due, the Director is hereby authorized to charge payment any fees required in connection with this Statement, or credit any overpayment of the same, to Deposit Account No. 06-1075 (Order No.: 001202.0110). A duplicate copy of this Supplemental Information Disclosure Statement is enclosed herewith.

An early and favorable action is respectfully  
requested.

Respectfully submitted,



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Substitute for form 1449A/B/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/766,557 (Conf. No. 3092)
Sheet	1	of	3	Filing Date	January 27, 2004
				First Named Inventor	Glenn J. Leedy
				Art Unit	2812
				Examiner Name	Amir Zarabian
				Attorney Docket Number	ELM-1 Cont.14

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US 4,604,162	08-05-1986	Sobczak	
		US 4,849,857	07-18-1989	Butt et al.	
		US 4,928,058	05-22-1990	Williamson	
		US 4,990,462	02-05-1991	Sliwa	
		US 5,110,712	05-05-1992	Kessler et al.	
		US 5,119,164	06-02-1992	Sliwa et al.	
		US 5,284,804	02-08-1994	Moslehi	
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		EP 0 201 380 B1	12-17-1986	Fairchild Semiconductor Corporation	
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		EP 0 455 455 B1	11-06-1991	AT&T Corp.	
		EP 0 487 302 B1	05-27-1992	Shin-ETSU Handotai Company Limited	
		EP 0 503 816 B1	09-16-1992	Shin-ETSU Handotai Company Limited	
		EP 0 518 774 B1	12-16-1992	France Telecom	
		EP 0 526 551 B1	02-10-1993	The Commonwealth of Australia	
		EP 0 554 063 B1	08-04-1993	Canon Kabushiki Kaisha	
		EP 0 555 252 B1	08-18-1993	Fraunhofer-Gesellschaft Zur Förderung Der Angewandten Forschung E.V..	
		WO 1989 010255	11-02-1989	3D Systems Inc.	
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		WO 1992 017901	10-15-1992	Integrated System Assemblies Corporation	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
		Jones, R.E., Jr. "An evaluation of methods for passivating silicon integrated circuits"; April 1972; pp. 23-8			
		Svechnikov, S.V.; Koblyatskaya, M.F.; Kimarskii, V.I.; Kaufman, A.P.; Kuzovlev, Yu. I.; Cherepov, Ye. I.; Fomin, B.I.; "A switching plate with aluminum membrane crossings of conductors"; 1972			
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PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
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		Maw, T.; Hopla, R.E.; "Properties of a photoimageable thin polyimide film"; Nov. 26-29-, 1990; pp. 71-6	
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